

## Deerfield Solar Tour Site Information

Deerfield is a community of almost 3000 people in Dane County, just south of Wisconsin's capitol, Madison. Cal Couillard, founder of the Couillard Solar Foundation and a long time resident of Deerfield, had a vision for his community.
Since the first solar array, installed at the Deerfield Middle-High School, Cal has donated almost 6 mega-watts of solar to the village, and has installed an additional 14.7 kW in arrays around Deerfield, with more planned.

## Site 1-Solar Pergola

Installed Summer 2020-15 kW - Powers the Barbershop in Liberty Commons Installer: Cris Folk
This solar pergola is the prototype for a new kind of solar structure. It is designed for beauty as well as function, and can be used in residential, business or community projects. It uses 36 bifacial solar panels, which use albedo, or reflected light to begin charging from early morning until well into the afternoon.

## Site 2 - Solar Shed

Installed 2019-4 kW - Off grid - battery storage and EV charging station
The corrugated aluminum at the side of the shed reflects additional light onto the panels, increasing the overall solar production.

## Site 3 - Deerfield Police Dept

Installed Fall 2021-15 kW now (will be $\mathbf{2 0} \mathbf{~ k W}$ ) - Will power the police department
Notice the different types of panels on the roof. The top row contains 7 mono-facial panels (solar cells on 1 side), 27 bifacial (solar cells on the front and back) 370 W panels $\mathrm{w} /$ silver frames (top, middle row right and on the lower roof on the left) and 12 bifacial 445W panels with black frames. The array will help us test the effectiveness of bifacial panels flushmounted to a light color roof.

## Site 4 - Deerfield Public Works

Installed March 2019-180 kW - Powers the village's waste treatment plant Installer: Arch Electric
These 600 monofacial panels are constructed as a ground-mount array. Underneath the array native plants are allowed to grow.

## Site 5 - Deerfield Middle/H.S.

Installed February 2019-360 kW - Supplies about 25\% of the school's energy needs Installer: Arch Electric
This half a mega-watt solar system produced approximately $25 \%$ of the school's energy needs. The solar monitoring system associated with the array can be used to develop energy curriculum for Deerfield students.

## Site 6 - Test Site - Deerfield Garage

Installed June 2020 - two $\mathbf{3 . 7} \mathbf{~ k W}$ arrays - Powers the village garage
These two arrays are a side-by-side test site designed to compare the output of bifacial vs. mono-facial arrays. Be sure to look at the inverters on the garage wall to compare the output of the two arrays to each other.


Use this $Q R$ code to see more information about the Deerfield mini solar tour and the Couillard Solar Foundation. Or go to CouillardSolarFoundation.org.
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